

Supplementary Table 1: List of oral vitamin D analogues

| Name | Indication | Brand name |
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| Paricalcitol (19-nor- 1 α ,25(OH)2D2) | Secondary hyperparathyroidism | Zemplar® (Abbott) |
| Doxercalciferol (1 α (OH)D2) | Secondary hyperparathyroidism | Hectorol® (Genzyme corp) |
| Falcalcitriol (26,27 F6- 1 α ,25(OH)2D3) | Secondary hyperparathyroidism (Japan only) | Fulstan® (Dainippon Sumitomo) and Hornel® (Taisho Yakuhin) |
| Maxacalcitol (22oxa- 1 α ,25(OH)2D3) | Secondary hyperparathyroidism and psoriasis (Japan only) | Oxarol® (Chugai Pharmaceutical) |
| Eldecalcitol (2 β -(3- hydroxypropoxy)- 1 α ,25(OH)2D3) | Osteoporosis (Japan only) | Edirol® (Chugai Pharmaceutical) |

Supplementary Table 2: Search strategies in Medline

(Ovid)

| Item | Search Terms |
|---------------|--|
| Herpesviruses | |
| 1 | (HHV adj1 ("1" or "2" or "3" or "4" or "5" or "6" or "7" or "8")) or (HHV?1 or HHV?2 or HHV?3 or HHV?4 or HHV?5 or HHV?6 or HHV?7 or HHV?8) |
| 2 | exp Herpesviridae Infections/ or exp Herpesviridae/ |
| 3 | herpes* or herpesvir* |
| 4 | exp Herpes Simplex/ |
| 5 | herpes simplex |
| 6 | HSV-1 or HSV?1 |
| 7 | Cold sore* |
| 8 | exp Herpes Labialis/ |
| 9 | Herpes Labialis |
| 10 | Herpes* adj2 Labial* |
| 11 | Hsv-2 or HSV?2 or (genit* herpes* or genit* sores) |
| 12 | exp Herpes Zoster/ |
| 13 | herpes zoster |
| 14 | vz virus* or VZV |
| 15 | varicella? |
| 16 | chickenpox or Chicken?pox |
| 17 | shingle* |
| 18 | neuralgia adj1 post?herpetic) |
| 19 | Epstein-Barr virus* or (burkitt lymphoma adj2 virus*) or e?b virus* or ((eb or e-b) adj virus*) or ebv or Epstein?barr virus* or infectious mononucleosis or glandular fever |
| 20 | Cytomegalovirus* or CMV |
| 21 | salivary gland virus* or hblv or betaherpesvirus or b-lymphotropic virus* or cihhv or icihhv or Roseolovirus or Roseola Infantum or Exanthema Subitum |
| 22 | Kaposi* sarcoma-associated herpesvir* or KSHV or Primary Effusion Lymphoma |
| 23 | ac?clovir or Zovirax or valac?clovir or valtrex or famc?clovir or famvir or penc?clovir or ganc?clovir or cidofovir or foscarnet* or valganc?clovir or lubocavir or brivudin or Docosanol or Sorivudine or Idoxuridine or Trifluridine |
| 24 | 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 |
| Vitamin D | |
| 25 | exp Vitamin D/ or exp Vitamin D Deficiency/ |
| 26 | (vitamin* or hydroxyvitamin* or dihydroxyvitamin*) adj1 d* |
| 27 | c?olecalciferol* or calciol* or calcitriol* or ergocalciferol* or calcifediol* or calcid?ol* or calciferol* or ercalcidiol* or ercalcitriol* or hydroxyergocalciferol* or hydroxycalciferol* or hydroxyc?olecalciferol* or dihydroxyc?olecalciferol* or ergosterol |
| 28 | (dihydrotachyst* or alphacalcid?ol or alfacalcid?ol or Falecalcitriol* or Maxacalcitol* or Oxacalcitriol* or Paricalcitol* or Lexacalcitol* or Seocalcitol* or Calcipotriol* or vitamin D analogue* |
| 29 | exp Familial Hypophosphatemic Rickets/ or exp Rickets, Hypophosphatemic/ or exp Rickets/ |
| 30 | Rickets |
| 31 | rachitides |
| 32 | rachitis |
| 33 | 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 |
| 34 | 24 and 33 |

Supplementary Table 3: modified keywords for grey literature search

| Search Concept | Keywords Groups |
|-------------------------|--|
| Herpesviruses | <p>Group 1: herpesvir* OR herpes* OR HHV* OR HSV* OR Cold sore* OR varicella* OR shingle*</p> <p>Group 2: chickenpox OR post-herpetic neuralgia OR Burkitt lymphoma OR EBV OR Epstein-Barr</p> <p>Group 3: Cytomegalovirus* or CMV OR Kaposi* sarcoma-associated herpesvir* or KSHV OR famc*</p> |
| Vitamin D | <p>Group 4: "vitamin D" or hydroxyvitamin* or dihydroxyvitamin*</p> <p>Group 5: calcitriol* OR cholecalciferol OR ergocalciferol* OR Calcidol</p> <p>Group 6: calcifer* OR ergosterol OR rickets OR Calcipotriol* OR vitamin D analogue</p> |
| Combination of concepts | (Group 1, Group 2, Group 3) x (Group 4, Group 5, Group 6) |

Supplementary Table 4: Domains of risk of bias assessment

| Domains | Explanation |
|--|--|
| Confounders | Not adjusted for confounders |
| Selection bias | Intervention studies: random sequence generation and allocation concealment Observational studies: and participation bias, selection of participants, and selection of controls |
| Misclassification of exposure and outcomes | Differential: recall bias, observer bias Non-differential: ascertainment bias |
| Performance bias and detection bias | Blinding of participants, personnel and outcome assessment |
| Attrition bias | Incomplete outcome data |
| Bias due to Missing Data | Differential loss to follow up and exclusion of individuals with missing data |
| Reporting bias | Selective reporting |
| Reverse causation | Defined outcomes prior to the exposures |